

Case study: North Sea

SondeTrax tracted over 26 miles in 34 operations with zero NPT

An operator in the North Sea needed data sets, cement evaluation, and mechanical cutting across multiple wells with different completion sizes. Efficient wireline operations required a reliable downhole tractor to deploy several tool strings to the required depth in complex offshore completions with the potential for collapsed casing.

The **SondeTrax™ wireline deployment tractor** from Baker Hughes was chosen for its unique efficiency for tractor cased hole services. The SondeTrax service leveraged the advanced technological advances and extensive operational experience of Baker Hughes.

In multiple campaigns that ran across several months, the SondeTrax tractor performed flawlessly. It delivered tool strings to the required well depths, acquired high-quality data and efficient mechanical intervention, and returned the equipment safely to the surface each time.

Real-time surface feedback was able to minimize deployment risks and enable production logging runs at specific locations in the wellbore. Precise, bi-directional control of the rugged, electro-mechanical drive train was instrumental for the pipe-cutting runs with both mechanical pipe cutters and 3 ½-in explosive cutters.

The ability to run tractors in tandem reduced the risk of getting stuck in the complex completions. Corrosion was assessed inside the casing with

a multi-finger caliper. The automatic fail-safe mechanism provided an extra layer of protection and helped ensure reliable deployment and tool retrieval across all operations.

The SondeTrax tractor lived up to expectations, running more than 26½ miles (42 km) on 34 operations with zero non-productive time (NPT). On each of these operations, the engineer controlled the SondeTrax functionality. Therefore, no additional personnel were required at the wellsite beyond the wireline crew.

Challenges

- Complex offshore completions required several tool strings across multiple wells
- High risk potential was present due to difficulty of control and susceptibility for collapsed casing

Results

- More than 26 miles (42 km) were tracted on 34 operations with zero NPT, saving time and reducing costs
- Tractors were run in tandem to avoid getting stuck
- Real-time surface feedback minimized risks
- Delivered high-quality data with reliable deployment and retrieval across multiple wells
- Precise bi-directional control was performed by site engineer with no additional personnel required

SondeTrax well tractor specifications

Temperature rating	302°F (150°C)
Pressure rating	15,000 psi (103.4 MPa)
Tool diameter	2.5 in. (64 mm)
Tool length	25.2 ft (7.672 m)
Tool weight	206 lb (93 kg)
Supply voltage	600V DC
Avg. operating current	1A
Max. operating current	2A
Max. tractor speed	34 ft/min (10.4 m/min)
Tractor force	750 lb continuous (340 kg) (1,000 lbs max)
Min. operating diameter*	2.75 in. (70 mm)
Max. operating diameter	9.2 in. (233 mm)
Reversible drive direction	Yes
Electrical feedthrough	1
Sensor / surface feedback	Cable head tension
	Tractor load
	Wheel speed
	Casing collar locator
	Drum arm diameter
	Cablehead voltage
	Tool temperature
Top connection	Sondex, female
Bottom connection	Sondex, male
Logging while tracting	Yes, requires multi-conductor cable

*Tracting in diameters less than 4½ in will limit the available max. tractor load.

